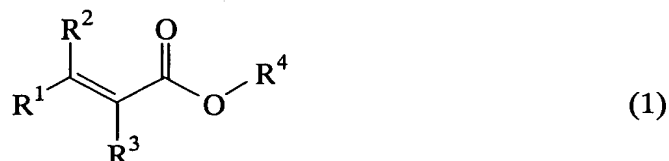


CLAIMS:

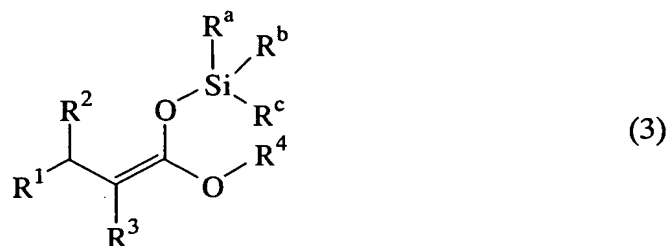
1. A process for preparing a silyl ketene acetal of the general formula (3), comprising the step of reacting an  
 5  $\alpha,\beta$ -unsaturated carboxylic ester of the general formula (1) with a hydrosilane or hydrosiloxane of the general formula (2) in the presence of a catalytic amount of tris(pentafluorophenyl)borane,



- 10 wherein  $\text{R}^1$ ,  $\text{R}^2$  and  $\text{R}^3$  are each independently hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 60 carbon atoms, or a pair of  $\text{R}^1$  and  $\text{R}^2$  or  $\text{R}^1$  and  $\text{R}^3$  may bond together to form a ring of 3 to 20 carbon atoms with the carbon atom(s) to which they are attached, and  $\text{R}^4$  is a  
 15 substituted or unsubstituted monovalent hydrocarbon group of 1 to 40 carbon atoms or a substituted or unsubstituted silyl group of up to 60 carbon atoms and free of a SiH bond,

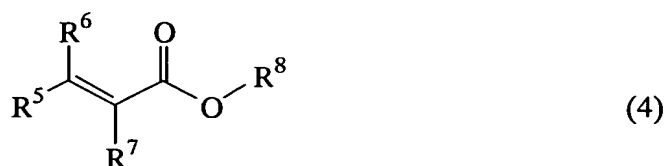


- wherein  $\text{R}^a$ ,  $\text{R}^b$  and  $\text{R}^c$  are independently selected from a  
 20 substituted or unsubstituted monovalent hydrocarbon group of 1 to 20 carbon atoms, an organoxy group of 1 to 20 carbon atoms, an organo(poly)siloxy group of 1 to 1,000 silicon atoms, and a halogen atom, or a pair of  $\text{R}^a$  and  $\text{R}^b$ ,  $\text{R}^a$  and  $\text{R}^c$ , or  $\text{R}^b$  and  $\text{R}^c$  may bond together to form a siloxane ring of 3  
 25 to 50 silicon atoms or a silicon-containing ring of 1 to 20 carbon atoms with the silicon atom to which they are attached, or  $\text{R}^a$ ,  $\text{R}^b$  and  $\text{R}^c$  may bond together to form a cage siloxane of 6 to 50 silicon atoms with the silicon atom to which they are attached,



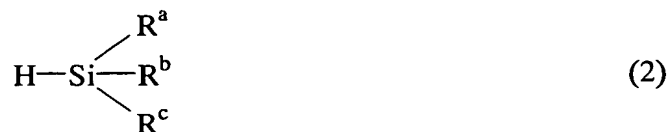
wherein  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ ,  $\text{R}^4$ ,  $\text{R}^a$ ,  $\text{R}^b$  and  $\text{R}^c$  are as defined in formulae (1) and (2).

2. The process of claim 1, wherein the  $\alpha, \beta$ -unsaturated carboxylic ester of formula (1) is added to a reactor charged with a mixture of the hydrosilane or hydrosiloxane of formula (2) and a catalytic amount of tris(pentafluorophenyl)borane.
3. The process of claim 1, wherein to a reactor charged with a catalytic amount of tris(pentafluorophenyl)borane, the  $\alpha, \beta$ -unsaturated carboxylic ester of formula (1) and the hydrosilane or hydrosiloxane of formula (2) are added in controlled amounts so as to provide 0.9 to 1.1 moles of Si-H bonds on the compound of formula (2) per mole of the compound of formula (1).
4. A process for preparing a disilyl ketene acetal of the general formula (5), comprising the step of reacting an  $\alpha, \beta$ -unsaturated carboxylic ester of the general formula (4) with a hydrosilane or hydrosiloxane of the general formula (2) in the presence of a catalytic amount of tris(pentafluorophenyl)borane,

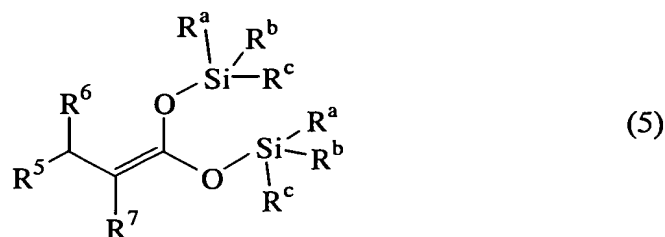


- wherein  $\text{R}^5$ ,  $\text{R}^6$  and  $\text{R}^7$  are each independently hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 60 carbon atoms, or a pair of  $\text{R}^5$  and  $\text{R}^6$  or  $\text{R}^5$  and  $\text{R}^7$  may

bond together to form a ring of 3 to 20 carbon atoms with the carbon atom(s) to which they are attached, and R<sup>8</sup> is a substituted or unsubstituted monovalent hydrocarbon group of 1 to 40 carbon atoms,



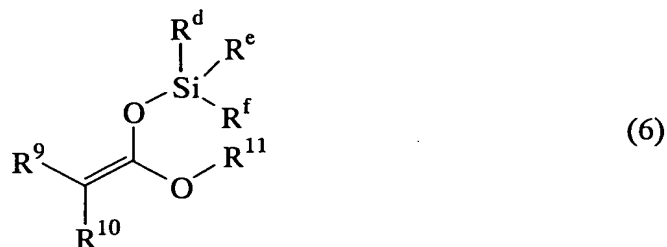
5 wherein R<sup>a</sup>, R<sup>b</sup> and R<sup>c</sup> are independently selected from a substituted or unsubstituted monovalent hydrocarbon group of 1 to 20 carbon atoms, an organoxy group of 1 to 20 carbon atoms, an organo(poly)siloxy group of 1 to 1,000 silicon  
10 atoms, and a halogen atom, or a pair of R<sup>a</sup> and R<sup>b</sup>, R<sup>a</sup> and R<sup>c</sup>, or R<sup>b</sup> and R<sup>c</sup> may bond together to form a siloxane ring of 3 to 50 silicon atoms or a silicon-containing ring of 1 to 20 carbon atoms with the silicon atom to which they are attached, or R<sup>a</sup>, R<sup>b</sup> and R<sup>c</sup> may bond together to form a cage siloxane of  
15 6 to 50 silicon atoms with the silicon atom to which they are attached,



wherein R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>a</sup>, R<sup>b</sup> and R<sup>c</sup> are as defined in formulae (4) and (2).

20 5. The process of claim 4, wherein to a reactor charged with a mixture of the hydrosilane or hydrosiloxane of formula (2) and a catalytic amount of tris(pentafluorophenyl)borane, the α,β-unsaturated carboxylic ester of formula (4) is added  
25 in an amount of up to 0.5 mole per mole of Si-H bonds on the compound of formula (2).

6. A process for preparing a disilyl ketene acetal of the general formula (7), comprising the step of reacting a silyl ketene acetal of the general formula (6) with a hydrosilane or hydrosiloxane of the general formula (2) in the presence  
 5 of a catalytic amount of tris(pentafluorophenyl)borane,

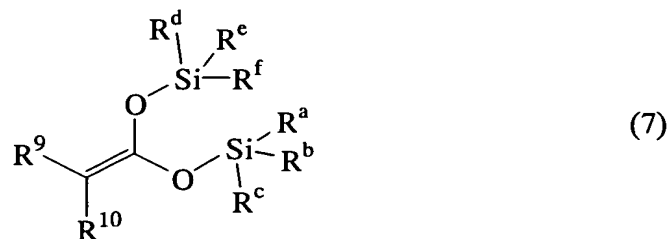


wherein  $\text{R}^9$  and  $\text{R}^{10}$  are each independently hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 60 carbon atoms, or a pair of  $\text{R}^9$  and  $\text{R}^{10}$  may bond  
 10 together to form a ring of 3 to 20 carbon atoms with the carbon atom to which they are attached,  $\text{R}^{11}$  is a substituted or unsubstituted monovalent hydrocarbon group of 1 to 40 carbon atoms,  $\text{R}^d$ ,  $\text{R}^e$  and  $\text{R}^f$  are independently selected from a substituted or unsubstituted monovalent hydrocarbon group of  
 15 1 to 20 carbon atoms, an organoxy group of 1 to 20 carbon atoms, an organo(poly)siloxy group of 1 to 1,000 silicon atoms, and a halogen atom, or a pair of  $\text{R}^d$  and  $\text{R}^e$ ,  $\text{R}^d$  and  $\text{R}^f$ , or  $\text{R}^e$  and  $\text{R}^f$  may bond together to form a siloxane ring of 3 to 50 silicon atoms or a silicon-containing ring of 1 to 20  
 20 carbon atoms with the silicon atom to which they are attached, or  $\text{R}^d$ ,  $\text{R}^e$  and  $\text{R}^f$  may bond together to form a cage siloxane of 6 to 50 silicon atoms with the silicon atom to which they are attached,



25 wherein  $\text{R}^a$ ,  $\text{R}^b$  and  $\text{R}^c$  are independently selected from a substituted or unsubstituted monovalent hydrocarbon group of 1 to 20 carbon atoms, an organoxy group of 1 to 20 carbon atoms, an organo(poly)siloxy group of 1 to 1,000 silicon

atoms, and a halogen atom, or a pair of  $R^a$  and  $R^b$ ,  $R^a$  and  $R^c$ ,  
 or  $R^b$  and  $R^c$  may bond together to form a siloxane ring of 3  
 to 50 silicon atoms or a silicon-containing ring of 1 to 20  
 carbon atoms with the silicon atom to which they are attached,  
 5 or  $R^a$ ,  $R^b$  and  $R^c$  may bond together to form a cage siloxane of  
 6 to 50 silicon atoms with the silicon atom to which they are  
 attached,



wherein  $R^9$ ,  $R^{10}$ ,  $R^a$ ,  $R^b$ ,  $R^c$ ,  $R^d$ ,  $R^e$  and  $R^f$  are as defined in  
 10 formulae (6) and (2).